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Eastern Atlantic Coast

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2.34 EASTERN ATLANTIC COAST

ELIZABETH S. CHILTON AND MEREDITH D. HARDY

For the purpose of this chapter, we divide the region into a northeastern and southeastern Atlantic Coast (referred to hereafter as the Northeast and the Southeast), noting the similarities and differences in the two regions' prehistory. Both regions have a long history of archaeological research stretching back to some of the earliest archaeological work in North America during the 19th and early 20th centuries (e.g., Jeffries Wyman, Frederick Ward Putnam, C. C. Abbott and William Henry Holmes).

Ecological Setting

The Northeast includes the modern states of New England and New York: this is essentially the previously glaciated north-eastern United States. The Northeast includes two primary eco-regions (areas of general homogeneity in ecosystems and their components: geology, physiography and hydrology, vegetation, soil, climate and wildlife), (1) the coastal plain and (2) the interior highlands, which are bisected by a range of both large and small river valleys (Map 2.34.1). The Northeast also includes a series of large and small offshore islands that were formed during the Pleistocene, mostly by glacial moraines, and which are overlain by outwash deposits. These islands and landforms include Long Island, Cape Cod, Martha's Vineyard, Nantucket and a series of smaller islands.

The dominant rivers that bisect the Northeast include the Saint Lawrence, which essentially forms the northern boundary of the region and runs southwest-northeast; the Connecticut and Hudson, which run north-south; and the Mohawk, which runs west-east across much of upstate New York, and empties into the Hudson River just north of Albany. Other than the Great Lakes, which lie at the northwestern edge of the region, there are two major lakes in the interior of the Northeast: Lake Champlain, which drains north into the Saint Lawrence River, and Lake George, which drains south into the Hudson River. The region is further dotted with hundreds of smaller lakes and ponds, swamps and wetlands.

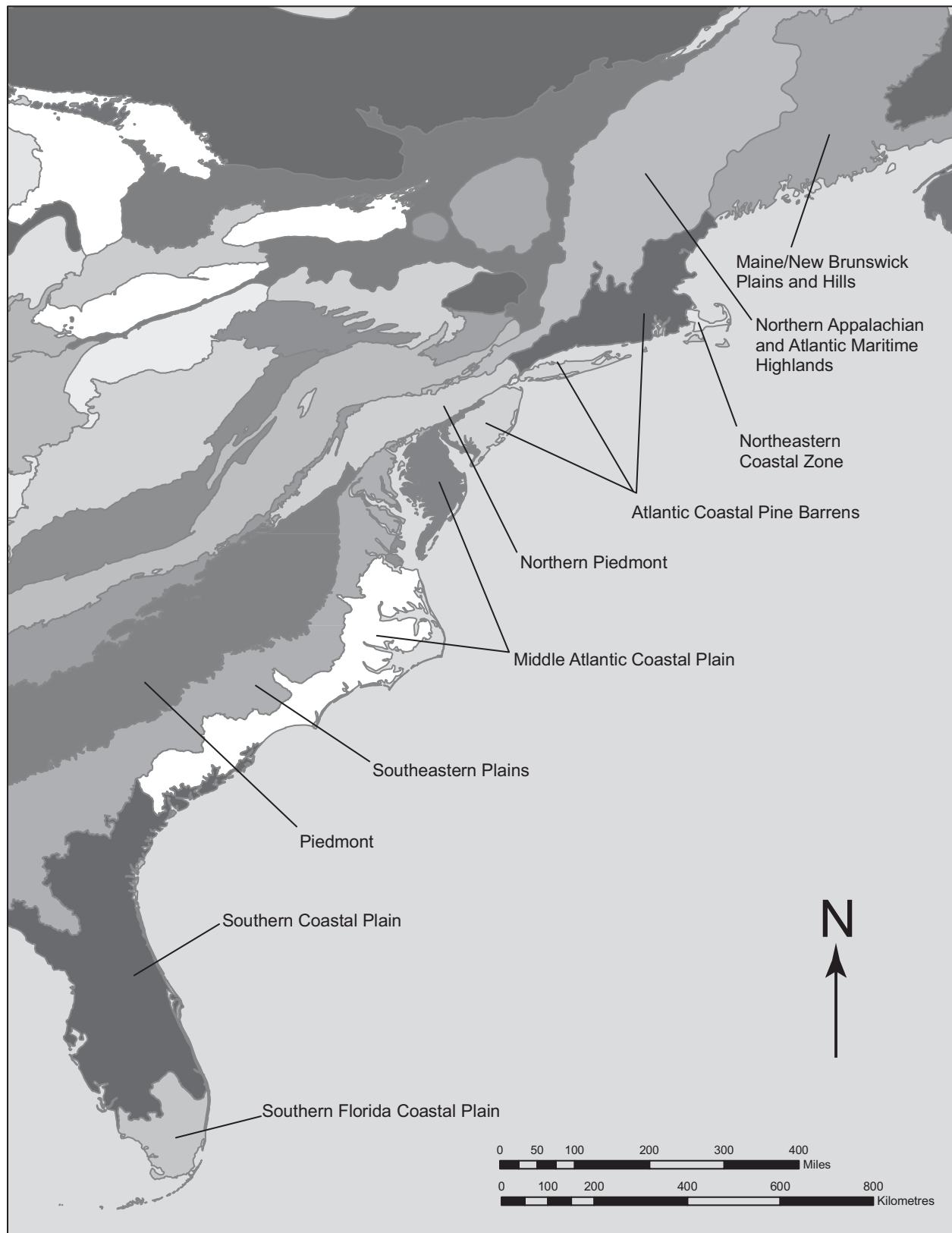
The Southeast includes the southern two-thirds of the Eastern Woodlands, stretching from Chesapeake Bay to the coasts of the Carolinas and down to the southern tip of Florida. It is made up of two primary eco-regions: (1) the Middle Atlantic

Coastal Plain and (2) the Southern Coastal Plain. Each of these is subdivided into several subregions that include barrier and sea islands, coastal marshes, swamps, flat woods and floodplains and terraces. The Middle Atlantic Coastal Plain extends from Delaware Bay to Chesapeake Bay and south along the coast to northern South Carolina, then spreads to the interior just north of Savannah, Georgia. The Eastern Shore Peninsula is a flat, low-lying plain protected by barrier islands that front lagoons, protecting estuarine wetlands, while the elevation of the Western Shore quickly climbs to over 30 m in height (Dent 1995). Barrier and sea islands parallel the coast from the Middle Atlantic through southern Florida, and protect systems of beaches, sand dunes, tidal salt marshes, mudflats and numerous bays. Coastal estuarine marshes began to develop when sea levels reached approximately modern levels (Custer 1994: 338).

The Southern Coastal Plain begins along the Atlantic Coast of northern South Carolina and expands towards the south to include much of central Florida; it also continues along the lowlands of the Gulf Coast from the Florida Panhandle to Mississippi. Similar in many respects to the Middle Atlantic Coastal Plain, the region consists of a series of barrier and sea islands that divide and create long narrow systems of lagoons and coastal marshes, estuaries and swampy lowlands.

The St. Johns River of northeastern Florida is the dominant feature of the Eastern Flatlands subregion of the Southern Coastal Plain. To the south lies the Indian River, where the ecology consists primarily of a coastal lagoon, marshes, braided streams and lakes (Milanich 1994: 249). East and south of the St. Johns River is an area known as the Central Lakes, or the Kissimmee/Okeechobee Lowlands, comprising pine and palmetto flatlands, hardwood hammocks (or non-pine forests), wet and wiregrass prairies and cypress swamps.

South of Lake Okeechobee, the Southern Florida Coastal Plain comprises a third eco-region distinct from the rest of the continental United States, made up of the unique wetlands known as the Everglades, the slightly higher-elevated Big Cypress pine flat woods and the limestone islands of the Florida Keys and the Ten Thousand Islands. The Everglades is an extensive marsh plain of Jamaica swamp sawgrass (*Cladium jamaicense*) in shallow, slow moving freshwater cut by sloughs and dotted with palm tree and oak hammocks ("tree islands").



MAP 2.34.I. Map of the ecological regions of the Atlantic Coast. (M. Hardy; derived from the U.S. Environmental Protection Agency, Commission for Environmental Cooperation 2006 [1997], available at <http://www.esri.com/metadata/esriprof80.html>.)

To the west, the Big Cypress Swamp is slightly higher in elevation, comprising cypress forest, freshwater marshes and prairie and pine, mixed swamp and hammock forests. To the east, low pinelands and sloughs rise to the Atlantic Coastal Ridge along the east coast, which consists of exposed pitted and rough limestone cut by rivers and sloughs. Finally, mangrove swamps, tidal wetlands dominated by numerous salt-tolerant trees and shrubs, are found at the edges of the sawgrass, in brackish and salt water and partially submerged areas (Whitney, Means & Rudloe 2004: 286).

While an overview of the Archaic Period has been provided by David Anderson (see Chapter 2.15), we begin this chapter with an overview of the Late Archaic Period as a means to provide a backdrop for the specific historical trajectories of the eastern Atlantic Coast.

Late Archaic/ Transitional Period (3000–1000 BCE)

The beginning of the Late Archaic Period marks essentially the start of modern environmental and climatic conditions. By 3000 BCE sea level rise from deglaciation had slowed considerably, and the floodplains of major rivers had settled into their near-modern beds. By this time many coastal sites from prior to the Late Archaic Period had become submerged, buried, destroyed by sea level rise, or – in the case of the formerly glaciated Northeast – destroyed or buried by the down cutting of river systems. Many of the islands and barrier beaches of the Eastern Coastal region had formed by this time as a result of stabilisation in sea level, making shellfish and maritime resources more predictable and stable.

The Northeast

For most of the Archaic Period, northeastern peoples can be considered classic hunter-gatherers. They moved their settlements seasonally within what were most likely well-established homelands. Like many hunter-gatherers, they modified and managed their environment through controlled burning and clearing (McWeeney 2003).

Over the course of the Late Archaic Period, archaeological evidence suggests that population size and/or density increased significantly. There is an increase in the number of sites that date to the Late Archaic (versus the Early and Middle Archaic), and site size is generally larger than in previous periods as well. The use of food storage pits and the production of soapstone vessels for cooking suggest that people were intensively collecting and cooking certain starchy, weedy plants, such as goosefoot (*Chenopodium berlandieri*), sumpweed (*Iva annua*) and sunflower (*Helianthus annuus*; Smith 1992). Goosefoot and sumpweed are oily, protein-rich, starchy seeds that were boiled into a porridge or stew for consumption. There is evidence in the Midwest that these seeds became so intensively harvested

that they became domesticated (i.e., genetically modified to be more productive and more easily processed; Smith 1992). In the Northeast, there is only weak evidence for the domestication of chenopodium, but it is clear that these plants were more intensively collected, stored and – perhaps most importantly – cooked during the Late Archaic Period (George & Dewar 1999). These starchy seeds, particularly goosefoot and sumpweed, require a great deal of boiling to make them both palatable and digestible; so it is no coincidence that, beginning around 1500 BCE, Native peoples began to create and use stone bowls (soapstone or steatite) for cooking. Native Americans certainly used bowls and other containers before that, but they were probably made of wood or other perishable materials and have not survived in the archaeological record. Before the invention or adoption of soapstone bowls, foods were probably roasted over a fire or boiled in a wooden bowl by heating stones and dropping them into the stew or water to be boiled. Soapstone is an excellent heat conductor. It is a soft rock that can be easily carved, and it can also be set directly into a fire without cracking. Thus it allowed for the cooking of starchy, oily seeds over a hot fire for long periods. The decline in the hemlock forests of the Northeast and the increase in hardwoods, especially oak, further suggest that acorns may also have been processed in these stone bowls, though we do not have direct evidence of that. This new cooking technology opened up the range of food available by consumption for Archaic Period peoples. Interestingly, the prevalence of what appear to be subterranean food storage pits also increases around this time. Food storage is not a normal activity of hunter-gatherers, since they typically fit their demand to the supply instead of the other way round. Thus, the intensive exploitation of what can only be considered third-choice foods for hunter-gatherers, combined with the adoption of new technologies to exploit them, and the introduction of food storage behaviour, indicate either some kind of population or food stress, or some other major societal change.

Because soapstone is available only in a few locations in the Northeast, and because it is rather heavy and difficult to transport, Native peoples fairly quickly (within 500 years or so) moved towards the creation of ceramic vessels made from fired local clays, though it is clear that the use of soapstone and ceramics overlapped for quite some time (Hoffman 1998). Clay is available across New England, and fired pottery vessels are also great heat conductors and even more malleable than soapstone. Clay vessels – like their soapstone counterparts – were adopted by northeastern peoples at about the same time as in the Southeast; but they were adopted in each region only as these technologies were needed to solve a particular technological problem or need (see Braun 1983).

By this time people had adapted to diverse subregions: forested uplands, fertile valley bottoms, rich coastal environments and interior wetlands. Evidence from thousands of archaeological sites across the region indicates that population sizes grew and social groups occupied seasonal settlements within well-defined homelands. The period is marked by a diverse array of projectile point types – side-notched, stemmed, corner-notched – many of which exhibit subregional stylistic

differences (Dincauze 1972, 1975; Pfeiffer 1983). These points were most likely used as thrusting spears, knives and projectiles that were thrown using a spear thrower or atlatl. The oldest recovered archaeological evidence for an atlatl dates to c. 6600–6000 BCE and comes from the Annasnapet Site in Carver, Massachusetts (Doucette 2005). Earlier stemmed and side-notched points give way to large, broad-spear points at the end of the Late Archaic or Terminal Archaic (1500–1000 BCE), though in coastal areas small-stemmed points continued to be used into the Woodland Period (1000 CE), in part because of the availability of quartz cobbles (Bernstein 2006). The earliest evidence of houses dates to this period, presumably because traces of earlier dwellings have simply not survived. They include small, round structures that may have sheltered small, extended family groups. From archaeological evidence and ethnographic analogy, activity is interpreted as changing seasonally, with large groups coming together for social gatherings and to exploit concentrated resources, but splitting up into smaller groups to utilise widely dispersed resources (e.g., large groups for spring fish runs vs. small winter hunting camps). These diverse site types are well represented in the archaeological record of the region. During this period there is a marked increase throughout the area of large coastal shell middens and year-round residence on the larger offshore islands, probably due to the stabilisation in sea level. As a result of the increase in reliable maritime resources, beginning in the Late Archaic there is some evidence for year-round or nearly year-round residence at sites in protected coastal harbours (Bernstein 1999, 2006; Gwynne 1982).

The Mid-Atlantic and the Southeast

In the Southeast the Late Archaic (3000–1000 BCE) was a period of major technological and economic change. By the close of this period many small groups were becoming increasingly sedentary, participating in long-distance exchange networks, experimenting with plant husbandry and making and using pottery. Small settlements were established in the coastal areas, on barrier islands and rises in coastal marshes, though small groups still used camps in interior areas to acquire seasonally available resources (Custer 1994: 338; Dent 1995: 205). Associated with increasing sedentism are the innovation and use of pottery, the creation of storage pits and formal burials indicative of the possible emergence of tribal or ascribed ranked forms of social organisation. Throughout most of the Southeast – and similar to the Northeast – it is believed that these emerging tribes would occasionally gather together at larger sites and then disperse to their smaller communities, though there is evidence (Russo 1992: 111) that some Archaic peoples were living on the coasts throughout the year.

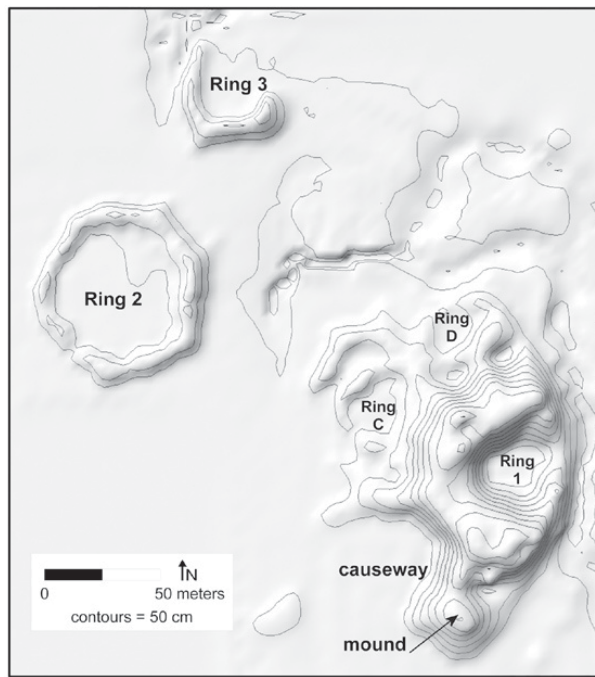
By c. 2000 BCE a social boundary developed that roughly defined broad cultural traditions of the Middle Atlantic and southeastern regions of the Eastern Woodlands. These divisions later correspond to the geographic distribution of

ethnohistorically observed language groups, dividing the Middle Atlantic into northern, southern, and, later, Inner Coastal Plain cultural regions (Phelps 1983: 26; Ward & Davis 1999: 194). The Middle Atlantic Northern and Southern regions are divided by the Neuse River, with the northern region (eastern Tidewater region) including the Outer Banks and stretching up the coast to roughly the Virginia border commonly referred to as the Susquahanna complex. The Southern region, referred to as the Savannah complex, includes the barrier islands and continental shoreline south to South Carolina.

Archaeologically, the Middle Atlantic region extends from coastal New York to Virginia, subdivided into regions by the numerous rivers that all flow into either the Delaware or Chesapeake bays (Hantman & Gold 2002: 271). In the Middle Atlantic and Chesapeake region, the Late Archaic Period is often referred to as either the Transitional or Intensification Period (Shaffer 2003; Dent 1995). There appears to have been intensification in the production of bone and antler tools and fishing from earlier times. As in the Northeast, broad-blade or broad-spear projectile points appear in the region between 2000 and 1500 BCE, and were possibly used as knives. They are typically found at sites associated with estuarine and wetland resources (Custer 1989: 151). Coastal peoples using the broad-blade tool complex appear to have practiced a varied subsistence, which included large-scale fishing and following anadromous fish runs, hunting and gathering shellfish and mast. Structures during this time were generally oval or circular and measured about 10 to 11 m², with storage pits, platform and regular hearths and earthen ovens. Settlements and food resources were centred on riverine and coastal environments, though people were still using inland camps on a seasonal basis (Hantman & Gold 2002: 275). An earlier narrow-blade complex (c. 3000–1500 BCE) may have been focused on inland resources. Stone-tool assemblages were made mostly from locally available materials, like quartz and quartzite, and the use of ground-stone tools, like grooved axes, appears to be associated with the broad-blade complex. Few burials from this period have been encountered.

The use of soapstone or steatite to make vessels, and perforated and grooved slabs used for stone-boiling (originally interpreted as net sinkers) are found from the Chesapeake to the Southern Coastal Plain, probably a holdover from Middle Archaic practices (Sassaman 1993: 78; 2006: 44). In the Chesapeake region, vessels of all sizes were carved of steatite that was quarried from outcrops along the Chesapeake Bay's tributaries and then transported throughout the region (Dent 1995: 182). Soapstone bowl manufacture possibly began as early as 4300 BCE, and these vessels were used to process the abundant autumn mast resources, in addition to grasses, pines and other plants and meat (Hart et al. 2002; Truncer 2004, 2006). Some researchers have interpreted the limited number of soapstone quarries and caches of soapstone objects at particular sites to mean that artifacts made from soapstone were valued, their presence indicative of exchange relationships.

Coastal sites comprising the Southern Coastal Plain are typically located along the edges of marsh and higher bluffs, made up primarily of shell-midden ridges, shell rings or arcs and



MAP 2.34.2. Map illustrating the three shell rings at Fig Island, South Carolina. (Courtesy Michael Russo, National Park Service, Southeast Archeological Center, Tallahassee, Florida.)

non-shell artifact scatters (Map 2.34.2) (Russo, Heide & Rolland 2002; Green, Stanyard & Saunders 2002). Larger mounded middens appear to have been locales for ceremonial activities, while deep, large sheet middens were probably permanent villages or semipermanent base camps (Russo, Heide & Rolland 2002; Sassaman 2006). A distinctive coastal shell ring cultural tradition emerged c. 2500 BCE and lasted until about 1000 BCE, with over sixty shell rings extending from the Stallings culture of coastal South Carolina to the St. Simons culture of Georgia and the Orange culture of northern and eastern Florida, and along the Gulf Coast to Mississippi (Russo, Heide & Rolland 2002). The middens of the shell ring cultural traditions are among the oldest in the southeastern United States, and are typically located in close proximity to many resources, such as estuaries and coasts, and freshwater marshes and ponds, making them amenable for year-round residency (Russo 1992). The rings themselves, with diameters ranging from about 30 to 100 m and heights of 1 to 6 m, are constructed of massive amounts of shellfish and fish distributed into rings, arcs or, as in southern Florida, U-shaped middens surrounding central plazas typically devoid of artifacts. These sites may represent villages or feasting and ceremonial sites for several aggregated communities (Saunders 2002: 62–3). The development of the shell ring tradition coincides with the first manufacturing and use of fibre-tempered pottery, and artifacts associated with these features include clay balls, worked bone tools and bone pins, ground-stone implements, shell tools and a lithic tool industry comprising mainly locally available materials. These ring sites include features such as shellfish steaming pits, ash hearths

and central, level plazas nearly empty of shell, and post-holes, among others (Russo 1992; Sassaman 1993: 62).

As in the Northeast, steatite vessels were gradually replaced by pottery, with several hundred years of overlap between these two technologies (Sassaman 1993). The earliest evidence for pottery production in the southeastern United States has been attributed to the fibre-tempered Stallings Island series (c. 3100–1150 BCE; Anderson *et al.* 1996: 31; Trinkley 1989: 73; Sassaman 1993: 16–9; Sassaman 2006: 16).

Traditionally, the use of ceramic technology is associated with the development of horticulture in addition to hunting and gathering activities. The earliest planted crops in eastern North America included cucurbits (squashes and gourds), sunflower, sumpweed and chenopod (Crites 1991; Smith 1989; Gremillion 1993).

Along the Southern Coastal Plain people began to stay in their riverine and upland base camps for longer periods of time, probably due to growing populations that resulted in diminishing territories (Cabak, Sassaman & Gillam 1996: 25). People visited barrier and sea islands from the spring through autumn months and moved inland during the winter to follow available foods, though some archaeologists contend that some populations were living on the islands year round (DePratter 1979). A model for seasonal movement between the coast and interior river drainages has been developed, where small groups were living a coastal, basically sedentary lifestyle, and occasionally used temporary inland, special-use camps to obtain seasonally available resources. This pattern, beginning in the Late Archaic and continuing through much of the following Woodland Period, is true for nearly the entire southeastern Atlantic Coast (Milanich 1971; Sassaman *et al.* 1990; Sassaman & Anderson 1995).

Along the northeastern and eastern Florida coasts people may have been more sedentary than their northern neighbours during the Late Archaic, or Orange Period (Russo 1992). Shell middens are found from north Florida to as far south as Jupiter Island. Along the St. Johns River both shell and small bone middens are encountered, with bone middens largely confined to the marshes of the upper St. Johns River. Milanich (1994: 89) notes that the largest sites are located along either major rivers or lagoons, where wetland resources are the most productive. Since sea levels had risen nearly 1.5 m over the course of the Archaic Period, it is likely that many older villages and camps were located on ancient coastlines and are now submerged.

Throughout South Florida during this time, fibre- or semi-fibre-tempered pottery, including Orange wares, appears (Griffin 2002: 148). People of the region were living in large base camps near the coast around the edges of the Everglades and Big Cypress Swamp, where they had access to tropical marine resources, and could collect and gather shellfish and plants, and fish and hunt (Widmer 1988: 213). Recent archaeological evidence indicates that people were using black-earth tree island hammocks during the Late Archaic, where they were possibly used as special-use camps, though there is some evidence for year-round occupation of larger islands (Carr 2002). Archaic materials have been recovered below a layer of mineralised carbonate soil (calcrete), and other sites have

produced Late Archaic objects well below the peat (Carr 2002: 196; Schwadron 2006: 2–3; Schwadron 2010). Other sites in the Everglades lying in areas of low elevation are now inundated. Russo (1991) and Schwadron (2010) present evidence for the large shell works, such as curvilinear shell middens, horseshoe-shaped middens and mounds at places like Horr's Island as dating to the Late Archaic period. People were also living on the Atlantic Coastal Ridge.

The material culture for the region was mostly a continuation of earlier technologies and practices, and includes shell picks, hammers, and chisels, bone points, hooks, and plaques, and stone broad-stemmed projectile points (Widmer 1988: 66). The dead were buried in wet cemeteries, shallow ponds and sloughs, with individuals in burial mats pinned down in peat deposits by wooden stakes, another continuation of Middle Archaic practices. Other kinds of burials include extended or secondary bundles, and placement in rock-covered limestone solution depressions and in middens.

Early and Middle Woodland Periods (c. 1000 BCE to 1000 [1500] CE)

The period when Native peoples began to make ceramic – or fired clay – vessels marks the start of what North American archaeologists typically call the Woodland Period. In the eastern United States this typically begins around 1000 BCE; in the Northeast it ends at about 1500 CE, and in the Southeast it ends around 1000 CE and is followed by the Mississippian Period (see Chapter 2.33). Ceramics represent a change in cooking technology and, thus, a change in subsistence resources. These resources include the variety of indigenous starchy plants discussed earlier and – eventually – tropical cultigens (maize, beans and cucurbits). These changes in economy and technology also probably affected social organisation and cultural traditions throughout the region.

The Woodland Period throughout the Eastern Woodlands has been subdivided by archaeologists into three main periods: Early, Middle, and Late Woodland. For the Northeast, the date ranges are slightly different: Early (1000 to 1 BCE), Middle (1 BCE to 1000 CE) and Late (1000 to 1500 CE). For the Southeast these correspond to the following date ranges: Early (1000 to 500 BCE), Middle (500 BCE to 500 CE) and Late (500 to 1000 CE). These differences in date ranges also correspond to differences in historical trajectories. In the Northeast, the population density and increase in sedentism during the Late Archaic Period are followed by a dispersal or population decline in the Early and Middle Woodlands. With the exception of the Iroquois of upstate New York, the archaeological evidence for the Late Woodland Period indicates that while Native peoples adopted maize horticulture by 1000 CE, they practiced an essentially hunting and gathering way of life. This “mobile farming” is characteristic of the Algonquian-speaking peoples of New

England up through the early contact period (Chilton 2005; this is discussed in more detail later).

However, in the Southeast, the Woodland Period is characterised by several important but gradual cultural changes leading to greater regional and local cultural diversity, indicated by semipermanent or permanent villages and special-use camps or extraction sites, the development and growth of horticulture, the building of mounds and the elaboration of burial practices (Struever & Vickery 1973; Smith 1989). These changes led eventually to the ways of life characteristic of the Mississippian Period in some areas (see Chapter 2.33). However, in the Chesapeake and Middle Atlantic regions, and in central and southern Florida the ways of life of the Late Woodland Period continued until European contact (Hantman & Gold 2002; Herbert 2002). In both areas of the Southeast there is evidence during late prehistory for a rise in social complexity, mound building, development of elaborate burial rituals and, in the Middle Atlantic, the spread of maize agriculture. In this section, we highlight the somewhat divergent histories of the Northeast and Southeast, while at the same time highlighting shared technologies and traditions.

Northeast Early and Middle Woodland Periods

The earliest ceramic vessels in the Northeast, dating to c. 1000–500 BCE, were coarse, grit-tempered and thick-walled. Many of these earliest vessels included crushed steatite as a tempering agent (temper, meaning crushed rock or other substances added to the clay). These early vessels were conical, most commonly cord-marked on the interior and exterior and formed using the coiling method. These ceramics are most commonly known as Vinette I pottery (Ritchie & MacNeish 1949). Certainly the early ceramics represent experimentation with new technology. By 500 CE Native peoples were familiar enough with this new technology that they began to experiment with new temper materials, surface treatments (decorations or other markings on the surface of the clay), and design motifs. Some of these Middle Woodland Period surface treatments include net-impressed, basket-impressed, dentate-stamped and scallop-shell impressed. Projectile point styles of the Early and Middle Woodland in the Northeast include a variety of lozenge and lanceolate styles (including Bushkill Phase type points, such as Rossville, Greene and Fox-Creek Stemmed; Chilton 1992).

There are fewer archaeological sites dating to the Early and Middle Woodland periods than sites that date to the Late Archaic Period (see *e.g.*, Keegan & Keegan 1999 for the Connecticut site distribution). One explanation for this is that the Late Archaic Period is three thousand years long (4000 to 1000 BCE), while the Early and Middle Woodland periods each

last 1000 years (1000 BCE to 1 CE, and 1 to 1000 CE, respectively). Nevertheless, even if one takes these differences in duration into account, it is clear that there are still significantly more Late Archaic sites. Another possible explanation is that populations actually decreased or at least dispersed following the Late Archaic. There is some evidence for social strife during the Late Archaic Period (e.g., Lamoka Lake; Ritchie 1932). There is also an increase towards the end of the Late Archaic for burial ceremonialism and related ritual, which may indicate both territorial marking (with cemeteries) and social tensions (increased ritual; see Dincauze 1968). With the introduction of a new cooking technology, which then opened up a wider variety of subsistence choices (e.g., chenopodium, sumpweed, acorns), it is possible that there was population dispersal away from the large, clustered, seasonal sites of the Late Archaic. This hypothesis requires further testing, but it is one possible explanation for the change in site density.

By the Middle Woodland Period, populations apparently began to cluster again, and archaeological sites from this period are more visible than those from the Early Woodland Period. By the Middle Woodland, around 700 CE, another new technology was adopted in the region: the bow and arrow. Bow and arrow technology was probably first adopted in the Arctic around 3000 BCE through contact with peoples from Northeast Asia; it then spread south and east through North and South America (Blitz 1988). There is some evidence for the independent invention of the bow and arrow in North America during the Archaic Period, and it is clear that the use of smaller, triangular points for use with the bow and arrow in eastern North America became widespread by about 500–600 CE (Nassaney & Pyle 1999). Evidence for this technology in New England in the adoption of a new projectile point form: a small, lightweight, triangular projectile, which is often thought to be associated with the bow and arrow (Fig. 2.34.1). The significance of bow and arrow technology is that it would have increased hunting efficiency, and (later) was extremely effective as a weapon of war.

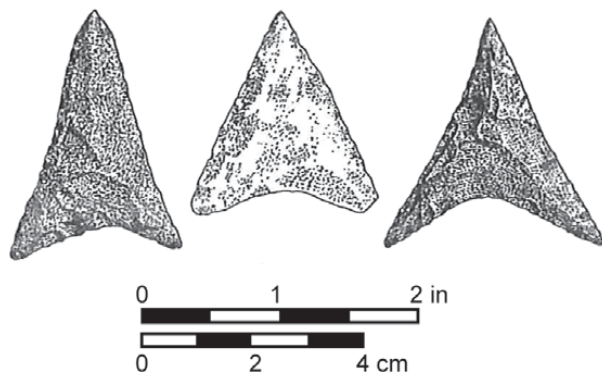


FIGURE 2.34.1. Typical Late Woodland triangles from the Northeast. (Fowler 1963: 3; published with the permission of the Massachusetts Archaeological Society.)

Early (c. 1000 to 200 BCE) and Middle Woodland (c. 200 BCE to 500 [1000] CE) Periods in the Southeast

Throughout the Middle Atlantic Coastal Plain and the Chesapeake region through the North Carolina coast, people continued to exploit coastal, estuarine and riverine resources, utilising small, special-use camps to obtain seasonally available resources that were typically located on sandy ridges overlooking the floodplains of hardwood swamps, and in bottomland zones where there was the greatest diversity in subsistence resources. Many of these short-term camps could have developed into more permanent villages, especially those located along major rivers. Small shell middens continued to be generated, possibly resulting from individual household refuse (Steponaitis 1986: 380). Houses excavated both in Delaware and Virginia dating from 1850 BCE to 908 and 740 BCE are oval or circular, measuring 3–5 by 6–8.5 m, with pit features, hearths and artifact caches (Hantman & Gold 2002: 276).

By the Middle Woodland Period people were living in the Inner Coastal Plain, with small groups travelling and camping upriver to follow anadromous fish runs (Dent 1995). While many small sites have been found from the Tidewater to the upper Coastal Plain next to marshes, few large shell middens have been associated with this period (Herbert 2002: 302).

There was a marked increase in the intensity of both local and interregional trade and interaction networks for exotic goods, especially with the Adena (c. 1000/800 BCE to 1 CE) and Hopewellian (c. 100 BCE to 500 CE) cultures of the Ohio River Valley (Dent 1995: 232). Adena-like objects, such as copper beads, red ochre, effigy pipes, gorgets and shell disc beads, have been archaeologically recovered from sites along rivers in both burial and nonburial contexts (Dent 1995: 234). Adena projectile points have been found on the eastern shore of the Chesapeake region, and Adena objects have been recovered from mortuary contexts on the Delmarva Peninsula, Delaware Valley and Susquehanna Valley (Hantman & Gold 2002: 283). The Delmarva Adena dates from c. 600 BCE through 100 CE, and is not found in association with domestic activities. This contact with Adena-Hopewell cultures may even have influenced the beginning of mound building in South Carolina, as evidenced by several Hopewell-style steatite or clay pipes recovered from sand burial mounds in the Coastal Plain of North Carolina (Custer 1989). There was also an increase in regional differentiation of pottery styles, and a growth in trade or movement of nonlocal, valuable commodities such as copper, marine shell, chert, mica, greenstone and other materials, many of which appear as mortuary goods (Steponaitis 1986: 381).

Excepting the Delmarva Adena and limited Hopewell interaction, there is little evidence for social differentiation, via body treatment, mound construction or the presence of valuable, nonlocal goods during the Early Woodland Period. Burial practices were varied, and included primary flexed, pit cremations and bundles. From the Southern Coastal Plain of the Middle Atlantic to the Carolinas and south to Florida, people buried their dead in low-lying sand mounds (Trinkley 1989: 83; Ward & Davis 1999: 206). By the Middle Woodland Period, burial mounds across the region were more elaborate, with increasing evidence for societal differentiation based on the presence of valuable, rare goods. Some mounds were used once, and others reused multiple times. These mounds, measuring on average 7.6 to 15 m in diameter and 1 m high, could contain up to 300 burials (Ward & Davis 1999: 206). Some individuals were buried with grave-goods, such as bone and shell beads, celts, arrow points made of stone and antler and smoking pipes styled similarly to Hopewellian stone platform pipes. Ossuaries (mass secondary graves) are also found along the South Carolina coast (Trinkley 1989).

The earliest pottery in the Middle Atlantic/Potomac area is referred to as Marcey Creek; these wares are tempered with steatite, and are largely confined to the Northern region (Ward & Davis 1999: 199). Steatite tempering appears to be used north of the Neuse River, while fibre tempering is found to the south (Hantman & Gold 2002: 277). In the Middle Atlantic, both on the coast and along the Susquehanna and Delaware rivers, the use of shell as tempering agents in pottery such as Mockley wares began c. 200 CE (Potter 1993: 62). The distribution of Abbott Zoned decorations on Mockley wares, limited largely to Virginia, could be indicative of ceremonial feasting and the rise of temporary social elites; this is an elaborately zoned decorated pottery that is similar to wares recovered from the Abbott Farm Site near Trenton, New Jersey. During the Early Woodland Period the northern region includes the Deep Creek Phase, with pottery wares comprising cord-marked, net-impressed and simple stamped motifs; similar wares in the Southern region are referred to as the New River phase (Dent 1995: 227). It is during the Middle Woodland Period, however, that greater regional distinctions begin to develop, with a rise in cord-marking on pottery (Herbert 2002: 307). The Deep Creek phase gave way to the Mount Pleasant in the Tidewater and Inner Coastal Plain during this time, demonstrating influence from their northern neighbours (Phelps 1983; Ward & Davis 1999: 203).

In the Southern portion of the Middle Atlantic, the Hamp's Landing and New River phases gave way to the Middle Woodland Cape Fear phase, comprising Hanover series (grog-tempered) and Cape Fear series (sand-tempered) pottery wares (Ward & Davis 1999: 204). Sites during this time are located along river and creek banks, the shores of estuaries and the edges of inland swamps. There is little evidence for horticulture throughout both the Southern Coastal and the Middle Atlantic regions, but this does not mean that these people were not maintaining gardens and gathering plant stuffs (Custer 1994).

Again, there was much continuity from Late Archaic practices. People continued to live along streams, estuaries and

the coast, but in greater numbers. Many shell midden sites are believed to have been camps used for gathering shellfish and other marine resources.

North of Charleston, South Carolina, there is evidence of northern influences, especially from the Deep Creek phase, which is referred to as the Northern Tradition. Deep Creek and Deptford assemblages are strikingly similar, perhaps the result of the slightly older Deep Creek practices of cord-marking and fabric-impressing pottery being adopted and continued by their southern neighbours (Trinkley 1989: 80).

In the Southern Coastal Plain, Early Woodland Refuge phase sites (1000–500 BCE) found from the Savannah to the Santee River drainages are interpreted as small inland camps located away from sources of shellfish, indicating seasonal movement across the landscape, while large sites were often located on rivers and bays (Anderson *et al.* 1996; Ledbetter 1995: 96; Sassaman *et al.* 1990: 13; Sassaman 1993; Steen & Braley 1994; Trinkley 1989: 78). Overall there appears to have been movement inland into more diverse environments. Sea levels, rising at rates ranging between 0.5 and 1.6 feet per year, flooded existing tidal marshes, further dispersing or “splintering” population groups; however, regional oscillations would have resulted in temporary drops in sea level and subsequent changes in patterns of settlement and resource use (DePratter 1976; Riggs & Ames 2003: 61–2; Trinkley 1989: 78). Many of the settlements and camps of this period would therefore probably be submerged in marshes or the Atlantic Ocean (Russo 1992: 114). Small stemmed bifaces have been recovered in association with Refuge assemblages.

The Deptford phase is generally regarded as the beginning of the Middle Woodland Period (c. 800/600 BCE until roughly 500/600 CE) throughout much of the Carolinas and Georgia (Anderson 1985: 52; Anderson *et al.* 1996; Milanich & Fairbanks 1980: 60). There are three recognised “subvarieties” of Deptford culture – the Atlantic, the Gulf Coastal Plain and Riverine – that extend from the South Carolina, Georgia, and the north Florida Atlantic Coast to the Florida Gulf Coast and down to the Tampa area (Stephenson, Bense & Snow 2002: 325). Deptford phase sites are found both along the coast and interior river valleys, near tidal marshes and on the edges of swamps (Milanich 1994; Stephenson, Bense & Snow 2002: 328; Trinkley 1989).

For the Atlantic area, there appear to be at least three kinds of sites that support the Milanich (1971) settlement model of coastal and estuarine residence and occasional, seasonal movement to the interior, though new evidence illuminates the variability in size, form and scope of many of these settlements. Large villages consisting of nearly year-round, multifamily residences tend to be located on live oak and magnolia hammocks next to salt marshes with access to a variety of foods. Smaller, presumably single family residences are located on the coast, and even smaller nuclear family inland and upland occupations may have been used during the late summer and autumn (Milanich & Fairbanks 1980: 72; Stephenson, Bense & Snow 2002: 328). Anderson (1985: 48) has proposed, however, that during the Deptford phase this situation is actually reversed, with permanent or

semipermanent villages located inland with seasonal visits to the barrier islands and coasts. Deptford houses are typically round or oval, with wooden posts between roughly 2.5 and 9 m long. Larger structures, measuring roughly 6.5 by 9 m, with closely set posts and interior hearths, appear to have been used as winter residences; smaller structures measuring 6 by 4 m, with wider-set posts and exterior hearths, may have been used during warmer months (Milanich 1994: 124–5).

During the Middle Woodland Period, pottery wares from the northern portion of the Southern Coastal Plain (South Carolina and northern Georgia) include the Hanover, Wilmington, McClellanville or Santee and Mount Pleasant phases, while the southern portion transitions into the Swift Creek, Wilmington and Cape Fear phases (Anderson 1985: 53; Stephenson, Bense & Snow 2002: 326; Trinkley 1989: 80–4).

In eastern and central Florida, the Orange Period gradually gives way to the Early Woodland St. Johns I Period (500 BCE to 750 CE). Along the St. Johns River and surrounding area, the practice of using fibre temper in pottery was gradually replaced with sand tempering, and St. Johns pottery is characterised by a “chalky” feel due to the presence of spicules from freshwater sponges in clays. Large, possibly permanent village sites located along the coast and the St. Johns River include large shell middens and clusters of smaller middens, truncated mounds and burial mounds. Many of these burial mounds, especially during St. Johns I, contained nonlocal objects presumably obtained through trade. Again, people moved seasonally between the coast and inland areas, utilising the coasts and lagoons during the winter and moving to inland rivers during the spring and summer, presumably to grow food and hunt (Hellmann 2011). Both Deptford and Swift Creek pottery wares have been found among St. Johns assemblages, evidence for interaction trade with northern peoples, in addition to some influence from Hopewellian and other neighbouring cultures (Milanich & Fairbanks 1980).

South of the St. Johns River, many archaeologists generally agree that there are three distinct regions that began to develop during the Early Woodland Period, based primarily on pottery traditions: Okeechobee or Belle Glade area, Caloosahatchee area (southwest Florida and along the Gulf Coast) and the Everglades or Circum-Glades area, located south of Lake Okeechobee and continuing along the eastern half of the southern peninsula with the western half referred to as Big Cypress Swamp (Griffin 2002; Widmer 1988, 2002).

In the Okeechobee region, the Okeechobee or Belle Glade culture began to develop around 500 BCE. This area is unique for its assemblage of earth and shell works, including small circle ditches (60–380 m in diameter), large circle ditches (380–600 m in diameter) straight ditches, canals (canoe canals) and low sand mounds up to 30 m in diameter located on natural levees (Carr 1985; Wheeler 1995). While similar earth and shell works and canals have been encountered from the Atlantic Coast near the Miami River to the Gulf Coast and the Caloosahatchee area, they are apparently concentrated in the Okeechobee area. Linear earthworks radiate out from semicircular earthen embankments or sand ridges, and end in sand mounds interpreted as individual house

mounds or platforms (Milanich 1994: 279; Widmer 2002: 384). Large circular canals were connected to lakes, sloughs and creeks. Some sites, like the Miami Circle, consist of a series of post-holes cut into the limestone bedrock (Widmer 2002); the Miami Circle measures roughly 11 m in diameter. The Fort Center Site, first occupied sometime c. 500–450 BCE and spanning nearly 2000 years of human activity, is perhaps one of the best studied and reported sites of the Belle Glade culture (Hale 1989; Sears 1982; Widmer 1988, 2002).

Mortuary patterns, especially during the second period of occupation at Fort Center (c. 200–600/800 CE), were essentially a continuation of Middle Archaic practices. Mortuary ponds were created, and a structure, probably a charnel house, was built in the middle, surrounded by wooden poles carved into animals, primarily birds.

After c. 100/200 CE, earth and shell work sites like large, semicircular sand mounds associated with pairs of parallel linear ridges began to appear across southern Florida (Hale 1989). Located in ecotones between the glades and higher prairie, these ridges were oriented in the same direction as the sheet-water drainage flow. The smaller ridges ended at small sand mounds, again probably serving as house platforms. Platform mounds, located next to middens and near ponds, slough or borrow pits, may have been used to prepare bodies for burial, and are cited as evidence for influence from Hopewell cultures (Widmer 1988: 77). Additional evidence for interaction with Hopewell cultures during the Middle Woodland or Glades I Period includes the presence of platform pipes at Fort Center and nearby sites (Luer 1995). Shell work sites, like shell mounds and middens, were not located in ecotones.

Maize pollen has been identified at Fort Center that dates to 450 BCE, and it is currently believed by many archaeologists that maize was an exotic material imbued with symbolic significance, and not consumed on a daily basis for subsistence (Hale 1989: 154; Sears 1982: 193; Widmer 1988: 76). People were gathering a variety of root crops and edible tubers, as well as bottle and cucurbita gourds, prickly pear cactus and elderberry, among other plants.

In the Everglades/Circum-Glades area, the Woodland Period is referred to as the Glades Period, subdivided into Glades I, II and III. During the Glades I (500 BCE to 750 CE) Period, tree islands of the Everglades and dune ridges along the Atlantic Ridge were used primarily as temporary, special-use camp sites, a continuation of Late Archaic practices (Schwadron 2006, 2010). Larger villages, associated primarily with black earthen middens in mangrove areas, were being established by c. 280 CE, when people began to be more reliant on estuarine resources (Widmer 1988: 215).

Glades material culture is characterised by a preponderance of tools manufactured from shell and bone. A large variety of bone tools have been identified from Glades sites (Griffin 2002; Widmer 1988), including pins, awls, points and net gauges, and shark teeth were also used. Shell was also used for a wide variety of tools, such as picks, hammers, adzes, celts, chisels, scrapers, plummets and net mesh gauges.

Northeast Late Woodland Period (1000–1500 CE)

Soon after the bow and arrow began to be used in the Northeast, another new technology was being gradually adopted by the region's people: maize horticulture. The type of corn that was adopted by northeastern peoples – Northern Flint or a similar eight-row variety – was similar to goosefoot and sumpweed in that it needed to be cooked for a long period over a hot fire in order to be consumed. Recent research on pottery vessels from New York State indicates the presence of maize in charred residues that date back to 200 BCE (Hart, Brumbach & Lusteck 2007). Residue analysis indicates the presence or absence of certain plants or animals, but it does not allow us to determine the prevalence of that foodstuff in any quantifiable way. Stable isotopes of human remains from New York and Ontario indicate that maize did not become a major portion of the diet until about 1000 CE (Katzenberg et al. 1995; Schwarcz et al. 1985). Maize was clearly being grown and consumed in the greater Northeast for at least a thousand years before it became a significant food crop for anyone in the region. The common bean (*Phaseolus vulgaris* L.) spread rapidly across the region starting around 1300 CE (Hart et al. 2002).

Given that there was an established trade of materials and new technologies between what is now New York State and New England going back to at least the Late Archaic, maize was almost certainly following these same communication pathways. The earliest maize kernels found archaeologically in New England date to about 1000 CE, with an increase in visibility around 1300–1500 CE (Chilton 2006; Little 2002). The fact that the number of Late Woodland Period archaeological sites rises fairly sharply – and in fact they outnumber sites of any other period when one standardises for period duration – suggests that maize horticulture is coincident with a rise in population size (see Keegan & Keegan 1999 for Connecticut).

In upstate New York, particularly for Iroquoian peoples, the adoption of maize horticulture is associated with several important societal changes: population increase, population density, the formation of villages, multiyear sedentism and a rise in violence and associated defensive features, such as palisades (Fenton 1978; Snow 1994; Tuck 1978).

Archaeological evidence for these particular societal changes is nearly absent in New England. Maize horticulture was adopted by coastal peoples and was apparently added to the large suite of plant and animal resources collected and consumed throughout the year. The adoption of maize horticulture does not seem to have caused a change in settlement location patterns on the coast, though it certainly seems to have led to a rise in population size and density (Duranleau 2009).

The adoption of maize horticulture does not seem to have had much effect on seasonal mobility in the New England interior (Chilton 1999). Maize did not become a staple food

until after European colonisation, when seasonal movements became difficult (Chilton 2002). While there is archaeological evidence for maize on many sites dating to the Late Woodland Period, all of these sites show a diverse array of food resources, including nuts, small and large mammals, fish, birds, reptiles and berries (Chilton 2008). Maize was planted in the spring, and then some families most likely dispersed for the summer, getting together again in the autumn for the maize harvest. Thus, New England Algonquians of the interior are best termed “mobile farmers” (Graham 1994).

Archaeological evidence for this “mobile farming” in the New England interior during the Late Woodland Period includes (1) continued seasonal use of sites, and a lack of year-round or even strong evidence for multiseason settlement; (2) a continued diverse subsistence base, based on a wide variety of plants and animal remains; (3) no evidence for defensive structures (e.g., palisades); and (4) ceramic traditions indicating fluid social boundaries within well-established homelands (Fig. 2.34.2) (Chilton 2008). Maize – and later, beans and squash – certainly had social, ideological and dietary importance for New England peoples. However, the cultivation of these crops led to different societal choices among the diverse groups of the eastern Atlantic.

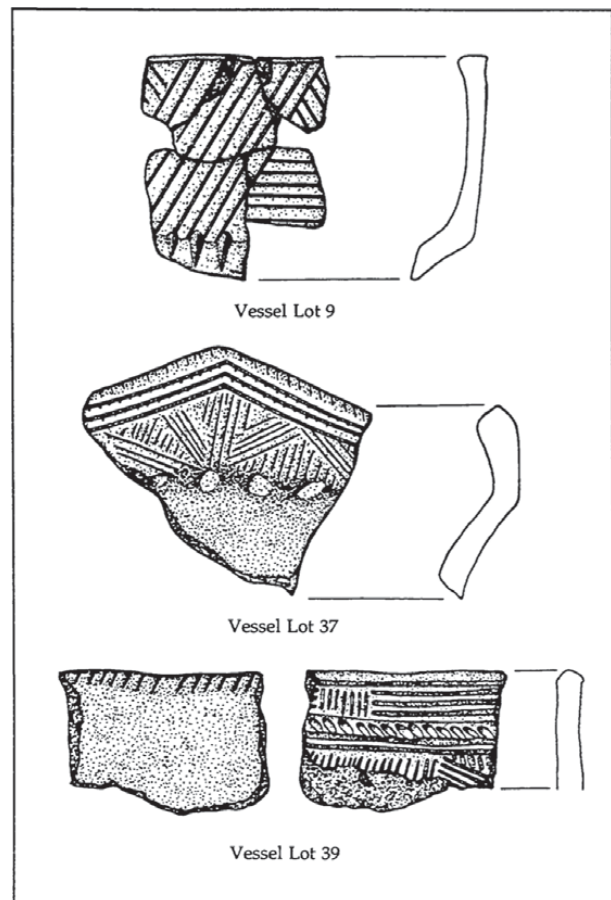


FIGURE 2.34.2. Typical variation in Late Woodland Period pottery from New England. (From Chilton 1996: 173.)

Southeast (c. 500–1000 CE) and Middle Atlantic (800–1650 CE) Late Woodland Periods

The Late Woodland Period is a dynamic period of transition (Trinkley 1989: 84), even though much of the material culture and some of the practices of the Middle Woodland continued to be produced. Long-distance trade networks appear to have been disrupted, burial mounds continued to be built but were less elaborate and people were no longer buried with nonlocal, presumably valuable, burial goods. Cemeteries also began to appear, both within and near villages. People were living in small, widely dispersed settlements, especially along floodplains of large streams and rivers, a transition that is typically interpreted as a rise in sedentism. The practice of using seasonal, special-use camps probably continued (Steponaitis 1986: 384). There was presumably an increase in population that paralleled an increase in the diversity of foodstuffs. The production of maize, beans and squash also began to intensify, though maize would not gain a dominant dietary role until later (Cabak, Sassaman & Gillam 1996).

For societies along the Chesapeake Bay and the Middle Atlantic Coast, late prehistory (c. 800–1650 CE) is referred to as the Late Woodland Period, as they were not directly affected by the spread and influence of Mississippian material cultural traits (Dent 1995; Phelps 1983). These societies continued many Middle Woodland traditions, but by the end of the Late Woodland Period they were practicing agriculture and had developed institutionalised hereditary hierarchies (chiefdoms), which were observed by Europeans in the early 17th century. In the Chesapeake Bay area, a population dispersal began around 900 CE that resulted in the growth of medium-sized villages in areas with soils good for crop production. By 1000–1200 CE there were disruptions in exchange networks throughout the region, and areas were abandoned for new locations (Stewart 1990). Small triangular projectile points arrived to the Chesapeake region c. 900 CE (Dent 1995: 247).

From the lower to middle Delaware Valley, settlements were established on the floodplains of rivers and large tributaries, away from tidal freshwater marshes (Custer 1994: 343; Dent 1995: 250). Middle Woodland settlement patterns on the Delmarva Peninsula continued, with numerous small sites serving as base camps and limited evidence for the development of horticulture or agriculture (Custer 1994: 344). After 1300 CE, villages began to cluster around larger settlements, and satellite communities developed (Ward & Davis 1999: 213). Elsewhere in the Chesapeake, settlements varied in size and structure, from small hamlets and farmsteads to larger, stockaded communities. One feature of note across the entire Tidewater and Middle Atlantic was the introduction of shell tempering to pottery sometime around 800 CE, though there is some evidence for the possible introduction of shell tempering on cord-marked and net-impressed wares on the

central coast of North Carolina, similar to Mockley wares of the Middle Woodland Period (Herbert 2002: 313).

The previously mentioned three subregions of the Middle Atlantic – Northern Coastal, Southern Coastal and the Inner Coastal plain – are identified in the Late Woodland by distinct language affiliations. The Northern Coastal region extending from the Tidewater to the islands was, at the time of European contact, occupied by Algonkian-speakers, and referred to archaeologically as the Colington phase (Herbert 2002: 311; Phelps 1983; Ward & Davis 1999: 210). Much is known about these communities based on observations made during the Raleigh expeditions of 1584–7, and John White's drawings. They had hereditary rulers living in capital towns comprising twelve to eighteen longhouses, with populations up to 200. Both small and large longhouses in these villages were arranged either concentrically around a cleared central plaza surrounded by a stockade, or along a wide central "street" with others scattered in nearby woods. The centralisation of populations into larger towns coincided with an intensity in agricultural activities. Their material culture consisted of mostly fabric-impressed pottery, small stone triangular points, polished celts, bone fishhooks, awls and pins and shell picks and hoes. There was much variation in regional burial practices; people were interred in pits surrounding villages, in ossuaries and in mounds. Pottery wares were decorated with fabric impressions, cord-markings, simple stamping and incisions.

The Southern Coastal region from the Neuse River down to Cape Fear was occupied by Siouan-speakers, and is referred to as the White Oak phase. Many White Oak cultural traits and practices are similar to those of their northern Colington phase neighbours, including pottery traits. However, the White Oak phase is notable for the use of mass secondary burials referred to as ossuaries, some with up to sixty individuals. Smaller group burials containing the remains of up to nine individuals have been encountered (Ward & Davis 1999: 218).

Finally, the Inner Coastal Plain was occupied by Iroquois-speaking Tuscarora tribes, and is referred to as the Cashie phase (Herbert 2002: 312; Phelps 1983). Pottery was tempered with small pebbles and fine sand instead of shell. Agriculture also emerged along the Carolina coast, as did greater cultural regionalism, and trade and exchange networks expanded (Herbert 2002: 293). Many earlier Deptford cultural practices continued into the Late Woodland Period, like the construction of sand burial mounds. Pottery wares are also often indistinguishable from Middle Woodland types. Along the South Carolina and northern Georgia coasts the St. Catherine's phase appears and the Santee, Hanover and Mount Pleasant phases continue, as did Swift Creek, Napier and Cartersville phases in Georgia. Complicated stamped pottery continued to be produced until at least 800 CE in the Georgia coastal plain (Stephenson, Bense & Snow 2002: 318).

To the south, at least seven tribes located between southern Georgia and somewhere south of St. Augustine spoke Timucuan; the southern boundary of this language group is unknown (Deagan 1978; Hellmann 2011). These Eastern Timucuan tribes lived in settlements ranging from small hamlets to larger villages consisting of up to thirty houses, situated around a central plaza. Some of these villages were also palisaded (Hellmann 2011).

In eastern Florida, as elsewhere, St. Johns II (750–1565 CE) was largely a continuation of many St. Johns I practices. People continued to live in both riverine and coastal areas, though the number of villages grew, as did their sizes (Hellmann 2011). There is evidence that there was some adoption of Mississippian traits by 1050 CE, such as the building of platform mounds. Complex forms of sociopolitical organisation also emerged, as shown by changes in burial patterns, even without a central role of agriculture in daily subsistence practice (Milanich 1994: 268).

As presented throughout this chapter, many tribal societies live in highly productive areas like ecotones (convergences between two or more ecological zones, including watersheds, estuaries and mangroves) that, while not necessarily amenable to surplus agricultural production, could provide enough of a reliable subsistence base to foster the development of part-time craft specialists, social rankings and hierarchies and even complex exchange systems (Russo 1988; Yesner 1980). Study of complex hunter-gatherers has proven that the domestication of plants and animals is not a necessary factor in the emergence of institutionalised social inequality (Sassaman 2004). Perhaps nowhere is the evidence more plain for the nonequivocal relationship between social “complexity” and agriculture than in eastern and southern Florida.

It is at the onset of the Glades II Period (750–1200 CE) that ranked social organisation emerges in southern Florida,

especially in the Caloosahatchee region of southwestern Florida with the rise of the Calusa chiefdoms. Widmer (1988) has associated this rise with the development of estuaries and an increased consumption of vertebrate marine animals over a heavier reliance on sharks and rays that occurred during Glades I (Griffin 2002: 312). Glades II is also characterised by the creation of numerous decorative styles of pottery, but there is a decrease in the regional variation of such styles; stylistic distinctions between the Glades and Ten Thousand Islands regions are mostly nonexistent. Schwadron (2010) contends that the Ten Thousand Islands region constitutes a cultural area separate from the Caloosahatchee, based on differences in ceramic and shell tool traditions and site types.

Archaeologists have identified three main kinds of sites in this region: large, nucleated villages of over 10 ha comprising complex shell middens with mounds, smaller villages of 3 to 4 ha made up of thick shell middens, and numerous small fishing hamlets or collection stations, comprising thin ephemeral shell middens, located primarily in the freshwater swamps and marshes of the Big Cypress Swamp (Griffin 2002: 279–80; Widmer 1988: 256). By 700–800 CE, complex sites consisting of shell mounds built of secondary deposit middens, connected by shell causeways, were appearing in the Caloosahatchee, indicative of the developing Calusa chiefdoms (Fig. 2.34.3) (Widmer 1988: 93). The majority of the smaller village sites

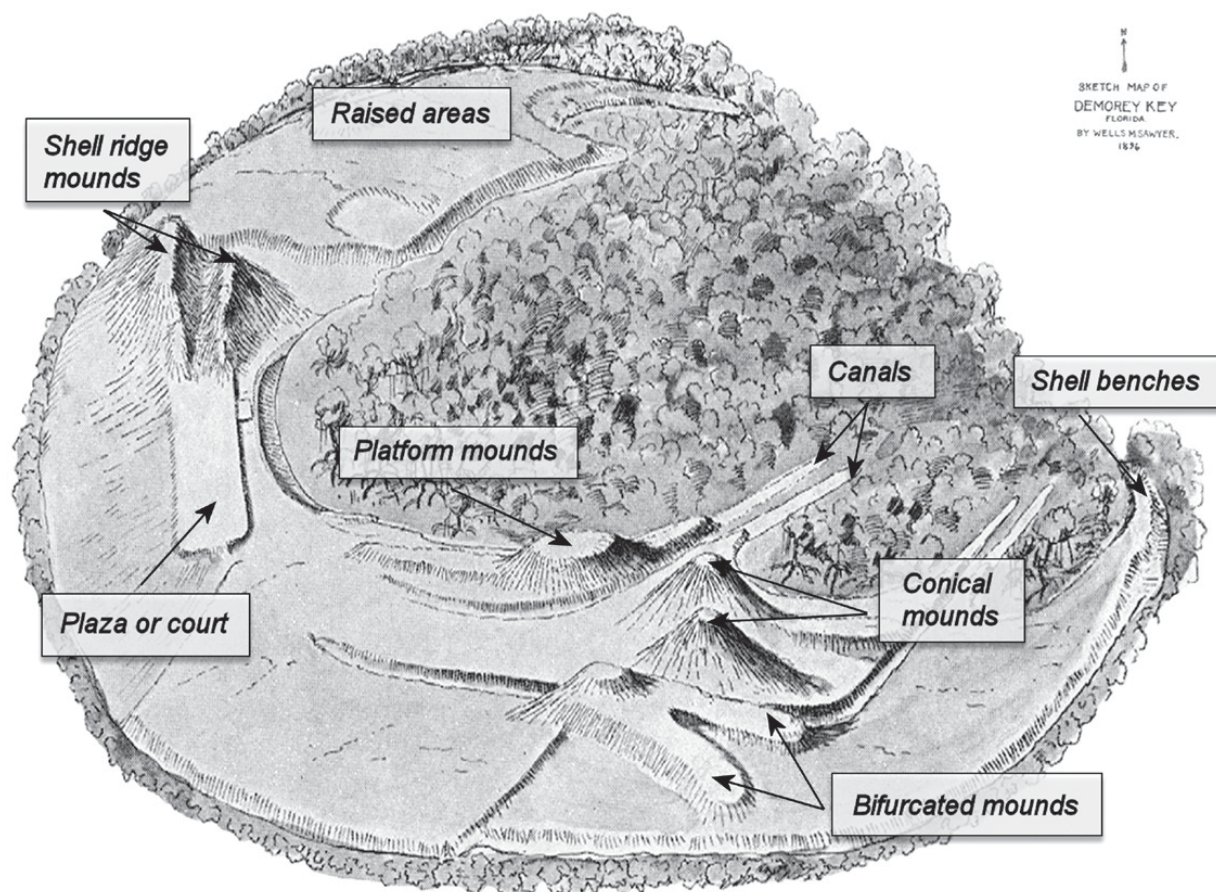


FIGURE 2.34.3. Plan and elevation of Ancient Shell Island or settlement of Demorey's Key, in Pine Island Sound. (From Cushing 1973: plate XXVIII.)

are centred primarily along the Shark River Slough and the mangrove zone of the Ten Thousand Islands. The number of inland hamlets and camps increased during Glades II. The tree islands continued to be used as temporary resource gathering camps, ranging in size from about 10 to over 200 m in diameter. At the end of Glades II, there is a sharp decrease in the number of sites (Griffin 2002). Burial mounds and associated charnel houses are known from the Caloosahatchee area, but not from the Circum-Glades region during this period.

From the Glades II Period until European contact there is little evidence for change in subsistence and artifact patterns. One exception is a break in the production of decorated pottery for about one hundred years, beginning 1100 CE, which is possibly associated with the Little Climatic Optimum (1000–1200 CE) (Griffin 2002: 331).

By the onset of the Glades III (1200–1500 CE) Period, decorated pottery is again being produced, and there is a marked increase in the number of shell, stone and wood objects, again reflecting a conservative material culture that stretches as far back as the Late Archaic. Many earthwork and shellwork structures were built, and there is evidence for increasingly complex ceremonial and burial practices. The Tequesta chieftaincies of southeastern Florida Everglades, the Atlantic Ridge and Ten Thousand Islands developed during this time, with villages located at the mouths of small creeks and streams, or on barrier islands; the main Tequesta village was located at the mouth of the Miami River on Biscayne Bay. Structures that have been excavated range in diameter from about 3.5 to 13 m in diameter. While shell mounds have not been encountered in southeast Florida, truncated temple mounds composed of sand and layers of shell or soil were established on natural sand ridges. It has been proposed (Scarry & Newsom 1992) that while the Calusa and their ancestors of southwestern Florida gathered a variety of plants and fruits for consumption, the Tequesta and their ancestors concentrated their efforts on six main kinds of fruits, especially the false mastic (*Mastichodendron foetissimum*), in addition to other edible plants.

Discussion: Social Complexity

Due to the fact that, with the exception of the Iroquois of upstate New York, northeastern Native peoples maintained their seasonal mobility after the adoption of horticulture, they have fallen through the cracks of cultural evolutionary theory (Chilton 2005). New England's native peoples have historically been relegated to the cultural backwaters of evolution, being classified as neither bands, tribes or states, and denied "evolutionary complexity" (Bragdon 1996: xvi). But must a society be sedentary and/or hierarchical in order to be complex? Over the past decade or so, anthropologists have begun to outline models of transegalitarian societies, which are neither egalitarian nor politically stratified (see Arnold 1996; Clark & Blake 1994; Hayden 1995). The Northeast, and particularly New England, presents us with a potential model of horizontal complexity or heterarchy (see Coupland 1996; Creamer 1996; Crumley 1987;

Feinman & Neitzel 1984). There are numerous archaeological examples of societies that are at once essentially egalitarian, yet quite large and complex, or cases where there are alternating episodes of horizontal expansion and vertical reorganisation in the formation of chiefdoms (e.g., Coupland 1996; Creamer 1996). The Northeast allows us to examine the different historical trajectories of the Iroquois and New England Algonquians, even given similar natural environments and access to technologies.

Social Complexity in the Southeast

For the southeastern United States, the evidence for the rise and fall of various small tribal societies as large, loosely integrated networks of possibly otherwise autonomous communities is evident throughout the Woodland Period. Based on the appearance and eventual collapse into disuse of shell rings and earthworks from the Carolina through Florida coasts and of ring villages and circular plaza settlements, and the construction of complex earth and shell structures in peninsular Florida, the Woodland Period, in many ways like in the Northeast, may be marked as a time of essentially transegalitarian, heterarchical societies living across a maritime and coastal plain landscape, with occasional expansions in vertical organisation. Changes in social organisation and complexity can be viewed as cyclical series of historically defined trajectories that fluctuate over time between increasing and decreasing organisational complexity, between coalescence and disintegration, depending on a variety of changing needs and circumstances (Anderson 2002; Parkinson 2002).

In sum, the eastern Atlantic Coast today offers diverse ecosystems – from the rocky New England Coast, to the deep river valleys and to the sandy plains of Florida. Native Americans adapted to these rich and varied environments, and they contributed to their formation over the past ten or more millennia. The coastal region shows considerable cultural continuity even to the present day, and the archaeological record shows a great deal of both continuity and change in native societies.

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